STATEMENT OF WORK
FOR A REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
AT THE ELLSWORTH INDUSTRIAL PARK SITE
IN THE VILLAGE OF DOWNERS GROVE, DuPAGE COUNTY, ILLINOIS

PURPOSE:

The purpose of this Statement of Work (SOW) is to set forth requirements for the preparation of an initial report and Work Plan evaluating and proposing interim actions at the Ellsworth Industrial Park Site ("the Site") for water supply alternatives, and for the preparation of a streamlined Remedial Investigation (RI) and Feasibility Study (FS). The RI shall evaluate the nature and extent of contamination at and from the Site, which includes source area control and groundwater assessment, and shall assess the risk from this contamination on human health and the environment. The FS shall evaluate alternatives for addressing the impact to human health and the environment from the contamination at the Site and nearby areas. The RI and FS Reports shall be conducted, at a minimum, consistent with the "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA" (U.S. EPA, Office of Emergency and Remedial Response, October, 1988) and any other guidance that U.S. EPA uses to conduct an RI/FS, as well as any additional requirements in the Administrative Order on Consent (AOC).

All documents or deliverables required as part of this SOW shall be submitted to U.S. EPA, with a copy to the Illinois Environmental Protection Agency (Illinois EPA), for review and approval by U.S. EPA, in consultation with Illinois EPA. The PRPs shall furnish all personnel, materials, and services necessary for, or incidental to, performing the RI/FS at the Site, except as otherwise specified herein.

At the completion of the RI/FS, U.S. EPA, in consultation with Illinois EPA, will be responsible for the selection of a Site remedy or remedies and will document this remedy selection in a Record of Decision (ROD). The remedial actions selected by U.S. EPA will meet the cleanup standards specified in CERCLA Section 121. That is, the selected remedial actions will be protective of human health and the environment, will be in compliance with, or include a waiver of, applicable or relevant and appropriate requirements of other laws, will be cost-effective, will use permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable, and will address the statutory preference for treatment as a principal element. The final RI and FS Reports as adopted by U.S. EPA will, with the administrative record, form the basis for the selection of the Site remedies and will provide the information necessary to support the development of the ROD.

As specified in CERCLA Section 104(a)(1), as amended by SARA, U.S. EPA will provide oversight of the PRPs' activities throughout the RI/FS, including all field sampling activities. The PRPs will support U.S. EPA's initiation and conduct of activities related to the implementation of oversight activities.

SCOPE:

The tasks to be completed as part of this RI/FS are:

Task 1: Evaluating and Proposing Interim Actions
Task 2: RI/FS Work Plan
Task 3: Additional Site-Specific Plans
Task 4: Treatability Studies
Task 5: Monthly Progress Reports

TASK 1: EVALUATING AND PROPOSING INTERIM ACTIONS

The PRPs shall prepare and submit a report to U.S. EPA and Illinois EPA evaluating and proposing water supply alternatives. The report shall also outline efforts associated with the abandonment of groundwater wells and simultaneously conducting a residential vapor intrusion study. The PRPs shall also submit a residential vapor intrusion study proposal that should include modeling using the ASTM model 1739-95, soil gas sampling, and indoor air sampling. Upon approval of the interim actions report, the PRPs shall prepare and submit a Work Plan detailing the activities associated with providing alternative water supply, abandonment of groundwater wells, and conducting a residential vapor intrusion study.

TASK 2: RI/FS WORK PLAN

PRPs shall prepare and submit a RI/FS Work Plan within 120 calendar days from the effective date of the AOC. PRPs shall use information from the existing information/documents, appropriate U.S. EPA guidance, and technical direction provided by the U.S. EPA Remedial Project Manager (RPM) as the basis for preparing the RI/FS Work Plan. If U.S. EPA disapproves of or requires revisions to the RI/FS Work Plan, in whole or in part, PRPs shall amend and submit to U.S. EPA a revised Work Plan which is responsive to the directions in all U.S. EPA comments, within 21 days of receiving U.S. EPA's comments. The RI/FS work must be coordinated and properly sequenced with the U.S. EPA. PRPs shall submit duplicate copies of the Work Plan to the U.S. EPA RPM and the Illinois Project Manager.

The RI/FS Work Plan shall include a comprehensive description of project tasks, the procedures to accomplish them, project documentation, and project schedule. PRPs shall use their quality assurance/quality control (QA/QC) systems and procedures to assure that the work plan and other deliverables are of professional quality requiring only minor revisions. Specifically, the Work Plan shall include the following elements:

- Identification of RI/FS project elements and the associated tasking including review of site documentation; previous field sampling and analysis activities, data gap description, and treatability study activities. Output of this task will be a detailed work breakdown structure of the RI/FS project.

- PRPs's technical approach to each task to be performed, including a detailed description of each task; the assumptions used; any information to be produced during and at the conclusion of each task; and a description of the work products that will be submitted to the U.S. EPA. Information shall be presented in a sequence consistent with the SOW.

- A schedule with specific dates for completion of each required activity and submission of each deliverable required by the SOW. This schedule shall also include information regarding timing, initiation, and completion of all critical path milestones for each activity and deliverable and the expected review time for the U.S. EPA.

- A list of key personnel providing support on the work assignment.

2.1 *Health and Safety Plan*. Prepare a site-specific HASP that specifies employee training, protective equipment, medical surveillance requirements, standard operating procedures, and a contingency plan in accordance with 40 CFR 300.150 of the NCP and 29 CFR 1910.120 1(1) and (1)(2), and U.S. EPA's OSHA Manual. A task-specific HASP must also be prepared to address health and safety requirements for site visits.

2.2 *Quality Assurance and Sampling.* The PRPs shall prepare a Quality Assurance Project Plan (QAPP) in accordance with EPA QA/R-5 (latest draft or revision). The QAPP shall describe the project objectives and organization, functional activities, and quality assurance/quality control (QA/QC) protocols that shall be used to achieve the desired Data Quality Objectives (DQOs). The DQOs shall, at a minimum, reflect use of analytical methods for identifying contamination and addressing contamination consistent with the levels for remedial action objectives identified in the National Contingency Plan. The QAPP developed for the RI/FS should be referenced or adapted whenever possible when preparing the QAPP for the RI/FS.

The PRPs shall also prepare a Field Sampling Plan (FSP) that defines the sampling and data collection methods that shall be used for the project. The FSP shall include sampling objectives; sample locations and frequency; sampling equipment and procedures; sample handling and analysis; and a breakdown of samples to be analyzed through the Contract Laboratory Program (CLP) and through other sources, as well as the justification for those decisions. The FSP shall consider the use of all existing data and shall justify the need for additional data whenever existing data will meet the same objective. The FSP shall be written so that a field sampling team unfamiliar with the site would be able to gather the samples and field information required. The PRPs shall document any required changes to the FSP in a memorandum to the RPM.

2.3 *RI Report*. The RI Report will be developed in three primary phases: the Phase I Technical Memorandum, the Phase II Technical Memorandum, and the Risk Assessment Report.

2.3.1 *Phase I Technical Memorandum*. PRPs shall submit to U.S. EPA for approval (with a copy to IEPA) a Phase I Technical Memorandum. The first phase of investigation will be carried out to characterize the physical and chemical aspects of contaminated groundwater and of soil and sediment contaminant source areas. The investigation of these source areas will involve obtaining data related to:

- Characteristics (e.g., type, quantity, chemical and physical properties, and concentrations) of on-site soils and sediments.

This information will be obtained from a combination of existing site information, field inspections, and site sampling activities. The source characterization will culminate in the preparation and submittal of a technical memorandum for the Phase I investigation activities. This technical memorandum will summarize the findings of the source characterization and may be used to refine the scope of the Phase II investigation activities outlined below.

The PRPs shall complete site characterization within 21 days of U.S. EPA's approval or modification of the Work Plan and sampling and analysis plans. PRPs shall provide U.S. EPA with analytical data within 21 days of each sampling activity, in a electronic format (i.e., computer disk) showing the location, medium and results. Within 7 days of completion of field activities, PRPs shall notify U.S. EPA in writing.

2.3.2 *Phase II Technical Memorandum*. PRPs shall submit to U.S. EPA for approval (with a copy to IEPA) a Phase II Technical Memorandum. The second phase of investigation will consist of a migration pathway assessment. The potential migration pathways at the site consist of groundwater. The migration pathway assessment will culminate in the preparation and submittal of a Phase II technical memorandum describing the findings of the Phase II investigations.

2.3.3 Risk Assessment Reports. The Risk Assessment will determine whether site contaminants pose a current of potential risk to human health and the environment in the absence of any remedial action. The PRPs shall address the contaminant identification, exposure assessment, toxicity assessment, and risk characterization. The Risk Assessment will be used to determine whether remediation is necessary at the site, provide justification for performing remedial action, and determine what exposure pathways need to be remediated.

2.3.3.1 Human Health Risk Assessment Report. The human health risk assessment shall focus on actual and potential risks to persons coming into contact with on-site contaminants as well as risks to the nearby residential and industrial worker populations from exposure to contaminated soils, sediments, surface water, air, and ingestion of contaminated organisms in nearby, impacted ecosystems. Central tendency and reasonable maximum estimates of exposure shall be defined for current land use conditions and reasonable future land use conditions. The risk assessment shall use data from the Site and nearby areas to identify the contaminants of concern (COC), provide an estimate of how and to what extent human receptors might be exposed to these contaminants, and provide an assessment of the health effects associated with these contaminants. The evaluation shall project the potential risk of health problems occurring if no cleanup action is taken at the Site and/or nearby areas, and establish target action levels for COCs (carcinogenic and non-carcinogenic)**.**

The risk evaluation shall be conducted in accordance with U.S. EPA guidance including, at a minimum: "Risk Assessment Guidance for Superfund (RAGS), Volume I - Human Health Evaluation Manual (Part A)," Interim Final (EPA-540-1-89-002)," OSWER Directive 9285.7-01A; December 1, 1989; and "Risk Assessment Guidance for Superfund (RAGS), Volume I - Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments)," Interim, (EPA 540-R-97-033), OSWER 9285.7-01D, January, 1998.

The human health risk assessment shall also include the following elements:

- Hazard Identification (sources). The PRPs shall review available information on the hazardous substances present at the Site and nearby areas, and identify the major COCs. COCs should be selected based on their detected concentrations and intrinsic toxicological properties.
- Conceptual Site Model and Exposure/Pathway Analysis.
- Characterization of Site and Potential Receptors.
- Exposure Assessment. PRPs shall develop central tendency and reasonable maximum estimates of exposure for current and potential land use conditions at and near the Site.
- Toxicity Assessment
- Risk Characterization.
- Identification of Limitations/Uncertainties.

2.3.3.2 Ecological risk Assessment Report. The ecological risk assessment shall be conducted in accordance with U.S. EPA guidance including, at a minimum: "Ecological Risk Assessment Guidance for Superfund, Process for Designing and Conducting Ecological Risk Assessments," (EPA-540-R-97-006, June 1997), OSWER Directive 9285.7-25.

The ecological risk assessment shall describe the data collection activities conducted as part of Task 1(B)(vi) as well as the following information:

- Hazard Identification (sources). The PRPs shall review available information on the hazardous substances present at and adjacent to the Site and identify the major COCs.

- Dose-Response Assessment. COCs should be selected based on their intrinsic toxicological properties.

- Preparation of Conceptual Exposure/Pathway Analysis.

- Characterization of Site and Potential Receptors.

- Selection of Chemicals, Indicator Species, and End Points. In preparing the assessment, the PRPs shall select representative chemicals, indicator species (species that are especially sensitive to environmental contaminants), and end points on which to concentrate.

- Exposure Assessment. The exposure assessment will identify the magnitude of actual exposures, the frequency and duration of these exposures, and the routes by which receptors are exposed. The exposure assessment shall include an evaluation of the likelihood of such exposures occurring and shall provide the basis for the development of acceptable exposure levels.

- Toxicity Assessment/Ecological Effects Assessment. The toxicity and ecological effects assessment will address the types of adverse environmental effects associated with chemical exposures, the relationships between magnitude of exposures and adverse effects, and the related uncertainties for contaminant toxicity (e.g., weight of evidence for adverse effects).

- Risk Characterization. During risk characterization, chemical-specific toxicity information, combined with quantitative and qualitative information from the exposure assessment, shall be compared to measured levels of contaminant exposure levels and the levels predicted through environmental fate and transport modeling. These comparisons shall determine whether concentrations of contaminants at or near the Site are affecting or could potentially affect the environment.

- Identification of Limitations/Uncertainties. The PRPs shall identify critical assumptions (e.g., background

concentrations and conditions) and uncertainties in the report.

2.4 *FS Report*. Within 60 calendar days after written approval of the RI report or upon such alternative time as requested by PRPs and approved by U.S. EPA, the PRPs shall submit to U.S. EPA for approval (with a copy to IEPA) a draft FS Report consisting of a detailed analysis of alternatives and cost-effectiveness analysis in accordance with NCP 300.68(h)(3)(I)(2). The FS Report shall contain a summary of alternative remedial actions in accordance with Chapter 3, NCP 300.68(h)(3)(I)(2)(A); 2) Cost Analysis in accordance with Chapter 7, NCP 300.68(h)(3)(I)(2)(B); 3) Institutional analysis in accordance with Chapter 4, NCP 300.68(h)(3)(I)(2)(C); 4) Public-health analysis in accordance with Chapter 5, NCP 300.68(h)(3)(I)(2)(D); 5) Environmental analysis in accordance with Chapter 6, NCP 300.68(h)(3)(I)(2)(E). The FS Report will be developed in three primary phases: the Remedial Alternatives Technical Memorandum, the Remedial Alternatives Evaluation, and the draft FS Report.

2.4.1 *Remedial Alternatives Technical Memorandum*. PRPs shall submit to U.S. EPA for approval (with a copy to IEPA) a Remedial Alternatives Technical Memorandum. The Remedial Alternatives Technical Memorandum shall develop an appropriate range of waste management options that will be evaluated through the development and screening of alternatives. PRPs shall identify remedial action objectives, summarize the development and screening of remedial alternatives, and include an alternatives array document.

2.4.2 *Remedial Alternatives Evaluation*. PRPs shall submit to U.S. EPA for approval (with a copy to IEPA) a Remedial Alternatives Evaluation.

The preliminary list of alternatives to address soil, sediments, surface water, groundwater, and air contamination at the Site and nearby areas shall consist of, but is not limited to, treatment technologies (i.e., thermal methods), removal and off-site treatment/disposal, removal and on-site disposal, and in-place containment for soils, sediments, and wastes.

Based on the analysis of the nature and extent of contamination and on the cleanup objectives developed in the previous sections, a

limited number of alternatives appropriate for addressing the remedial action objectives shall be identified and assessed. The limited number of alternatives identified shall be a result of a preliminary screening and evaluation of the larger set of remedial alternatives initially identified. The limited number of alternatives shall include a "no-action alternative." Whenever practicable, the alternatives shall also consider the CERCLA preference for treatment over conventional containment or land disposal approaches.

The use of presumptive remedy guidance, if appropriate and applicable to any of the disposal areas of the Site, may also provide an immediate focus to the identification and analysis of alternatives. This guidance includes, but is not limited to: "Implementing Presumptive Remedies" (EPA 540-R-97-029, October 1997). Presumptive remedies involve the use of remedial technologies that have been consistently selected at similar sites or for similar contamination.

The limited number of alternatives selected for detailed analysis, including any identified presumptive remedies, shall be described with enough detail so that the entire treatment process can be understood. Technologies that may apply to the media or source of contamination shall be listed in the RI/FS Report.

TASK 3: ADDITIONAL SITE-SPECIFIC PLANS

3.1 *Develop Site Management Plan.* After the U.S. EPA approval of the RI/FS Work Plan, the PRPs shall prepare a Site Management Plan (SMP) 30 days after RI/FS Work Plan approval that provides U.S. EPA with a written understanding of how access, security, contingency procedures, management responsibilities, and waste disposal are to be handled.

3.1.1 *Develop Pollution Control and Mitigation Plan.* PRPs shall prepare a Pollution Control & Mitigation Plan that outlines the process, procedures, and safeguards that will be used to ensure contaminants or pollutants are not released off-site during the implementation of the RI.

3.1.2 *Develop Transportation and Disposal Plan (Waste Management Plan).* PRPs shall prepare a Transportation & Disposal Plan that outlines how wastes that are encountered during the RI will be

managed and disposed of. PRPs shall specify the procedures that will be followed when wastes will be transported off-site for storage, treatment, and/or disposal.

3.1.3 *Data Management Plan.* PRPs shall prepare a Data Management Plan that outlines the procedures for storing, handling, accessing, and securing data collected during the RI.

3.1.4 *Develop Other Plan(s).* PRPs shall develop other plans, as necessary, to implement the RA.

TASK 4: TREATABILITY STUDIES

Technologies that may be suitable to the Site should be identified as early as possible to determine whether there is a need to conduct treatability studies to better estimate costs and performance capabilities. At present, it is unknown whether a bench test or pilot study will be conducted. However, should a bench test or pilot study be determined as necessary, the PRPs shall submit a testing plan identifying the types and goals of the study. The treatability study shall determine the suitability of remedial technologies to site conditions and problems.

The three levels of treatability studies are laboratory screening, bench-scale testing, and pilot-scale testing. The laboratory screening is used to establish the validity of a technology to treat waste and is normally conducted during the FS. Bench-scale testing is used to identify the performance of the technology specific to a type of waste for an operable unit. Often bench-scale tests are conducted during the FS. Pilot-scale testing is used to provide quantitative performance, cost, and design information for remediation and is typically performed during RI/FS (see the Fact Sheet, *Guide for Conducting Treatability Studies Under CERCLA*, November, 1993).

During treatability studies, PRPs shall provide U.S. EPA with the following deliverables:

4.1 *Identification of Candidate Technologies Memorandum.* This memorandum shall be submitted within 30 days after completion of field investigations. If U.S. EPA disapproves of or requires revisions to the technical memorandum identifying candidate technologies, in whole or in part, PRPs shall amend and submit to U.S. EPA a revised technical memorandum identifying candidate technologies which is responsive to the directions in all U.S. EPA comments, within 21 days of receiving U.S. EPA's comments.

4.2 *Treatability Testing Statement of Work.* If U.S. EPA determines that treatability testing is required, within 30 days thereafter [or as specified by U.S. EPA], PRPs shall submit a treatability testing Statement of Work.

4.3 *Treatability Testing Work Plan.* Within 30 days of submission of the treatability testing Statement of Work, PRPs shall submit a treatability testing Work Plan, including a schedule. If U.S. EPA disapproves of or requires revisions to the treatability testing Work Plan, in whole or in part, PRPs shall amend and submit to U.S. EPA a revised treatability testing Work Plan which is responsive to the directions in all U.S. EPA comments, within 21 days of receiving U.S. EPA's comments.

4.4 *Treatability Study Sampling and Analysis Plan.* Within 30 days of the identification of the need for a separate or revised QAPP or FSP, PRPs shall submit a treatability study sampling and analysis plan. If U.S. EPA disapproves of or requires revisions to the treatability study sampling and analysis plan, in whole or in part, PRPs shall amend and submit to U.S. EPA a revised treatability study sampling and analysis plan which is responsive to the directions in all U.S. EPA comments, within 21 days of receiving U.S. EPA's comments.

4.5 *Treatability Study Site Health and Safety Plan.* Within 30 days of the identification of the need for a revised health and safety plan, PRPs shall submit a treatability study site health and safety plan.

4.6 *Treatability Study Evaluation Report.* Within 30 days of completion of any treatability testing, PRPs shall submit a treatability study evaluation report as provided in the Statement of Work and Work Plan. If U.S. EPA disapproves of or requires revisions to the treatability study report, in whole or in part, PRPs shall amend and submit to U.S. EPA a revised treatability study report which is responsive to the directions in all U.S. EPA comments, within 21 days of receiving U.S. EPA's comments.

TASK 5: MONTHLY PROGRESS REPORTS

The PRPs shall submit monthly written progress reports to U.S. EPA and Illinois EPA concerning actions undertaken pursuant to the AOC and this SOW, beginning 30 calendar days after the effective date of the AOC, until termination of the AOC, unless otherwise directed in writing by the RPM. These reports shall describe all significant developments during the preceding period, including the work performed and problems encountered, analytical data received during the reporting period, and developments anticipated during the next reporting period, including a schedule of work to be performed, anticipated problems, and actual or planned resolutions of past or anticipated problems.

ATTACHMENT A

Summary of Major Submittals for the Remedial Investigation/Feasibility (RI/FS) Study Ellsworth Industrial Park Downers Grove, DuPage County, Illinois		
DELIVERABLE	**COPIES**	**SUBMITTAL DATE**
Interim Actions Report	3	60 days after effective date of AOC
Residential Vapor Intrusion Study	3	60 days after effective date of AOC
Interim Action Work Plan	3	30 days after approval of Interim Actions Report
Draft RI/FS Work Plan	3	120 days after effective date of AOC
Final RI/FS Work Plan	3	21 days after EPA comments
Health & Safety Plan	3	within 120 days after effective date of AOC
Field Sampling Plan	3	within 120 days after effective date of AOC
Quality Assurance & Analysis Plan	3	within 120 days after effective date of AOC
Remedial Investigation (RI) Report	3	45 days after approval of Risk Assessment
Phase I Tech Memo	3	30 days after RI/FS Work Plan approval
Phase II Tech Memo	3	60 days after RI/FS Work Plan approval
Human Health Risk Assessment Report	3	90 days after RI/FS Work Plan approval
Ecological Risk Assessment Report	3	90 days after RI/FS Work Plan approval
Feasibility Study Report	3	60 days after completion of RI
Remedial Alternatives Tech Memo	3	30 days after completion of field investigations
Remedial Alternatives Evaluation	3	30 days after approval of RA Tech Memo
Site Management Plan	3	30 days after approval of RI/FS Work Plan

Summary of Major Submittals for the Remedial Investigation/Feasibility (RI/FS) Study Ellsworth Industrial Park Downers Grove, DuPage County, Illinois		
DELIVERABLE	**COPIES**	**SUBMITTAL DATE**
Pollution control and Mitigation Plan	3	30 days after approval of RI/FS Work Plan
Transportation and Disposal Plan	3	30 days after approval of RI/FS Work Plan
Data Management Plan	3	30 days after approval of RI/FS Work Plan
Identification of Candidate Technologies Memorandum	3	30 days after completion of field investigations
Treatability Testing Statement of Work	3	30 days after completion of field investigations
Treatability Testing Work Plan	3	30 days after approval of Treatability Testing Statement of Work
Treatability Study Sampling and Analysis Plan	3	30 days after completion of field investigations
Treatability Study Site Health and Safety Plan	3	30 days after completion of field investigations
Treatability Study Evaluation Report	3	30 days after completion of field investigations
Monthly Progress Reports	3	In accordance with the AOC